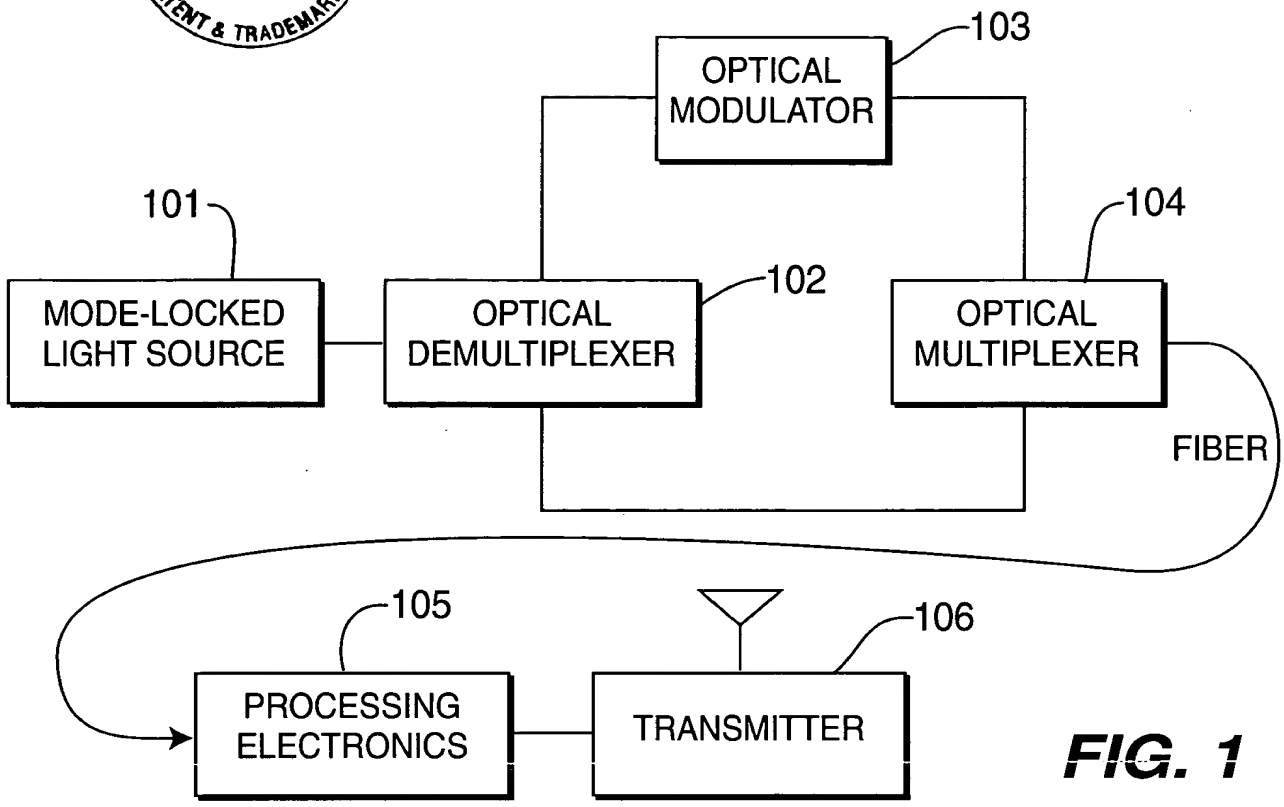


FIG. 1

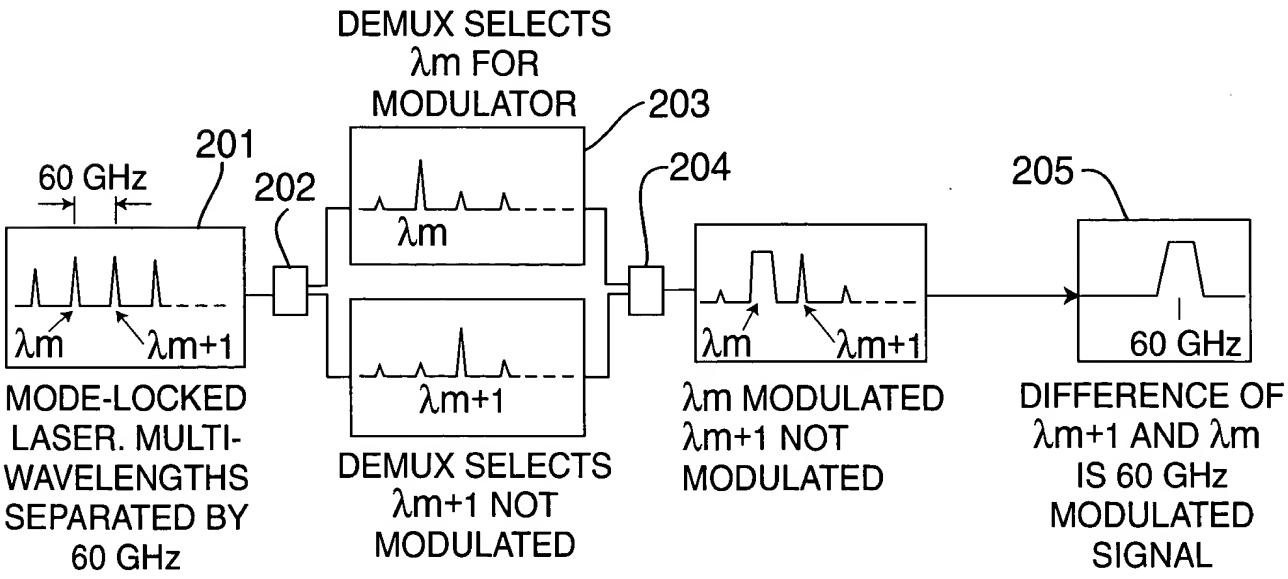
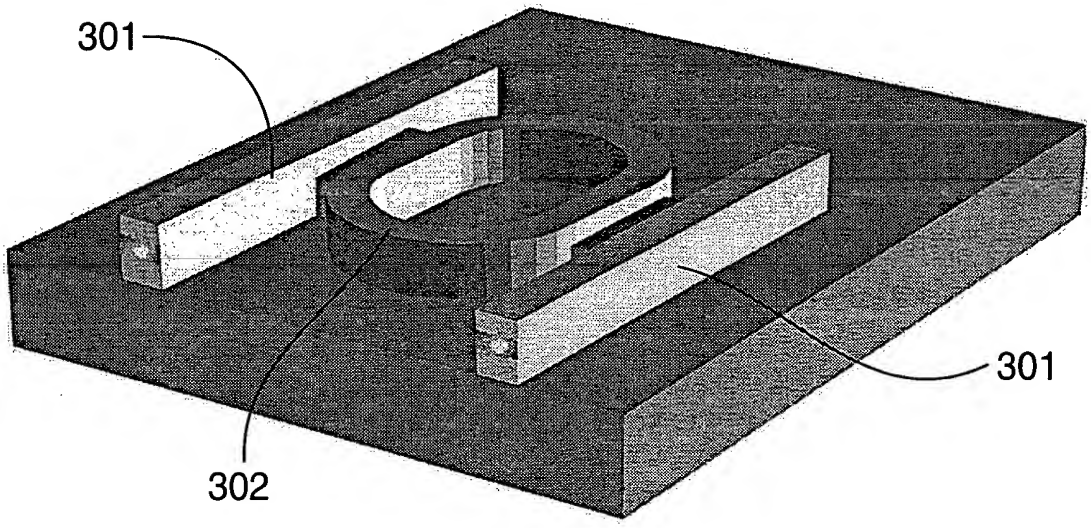
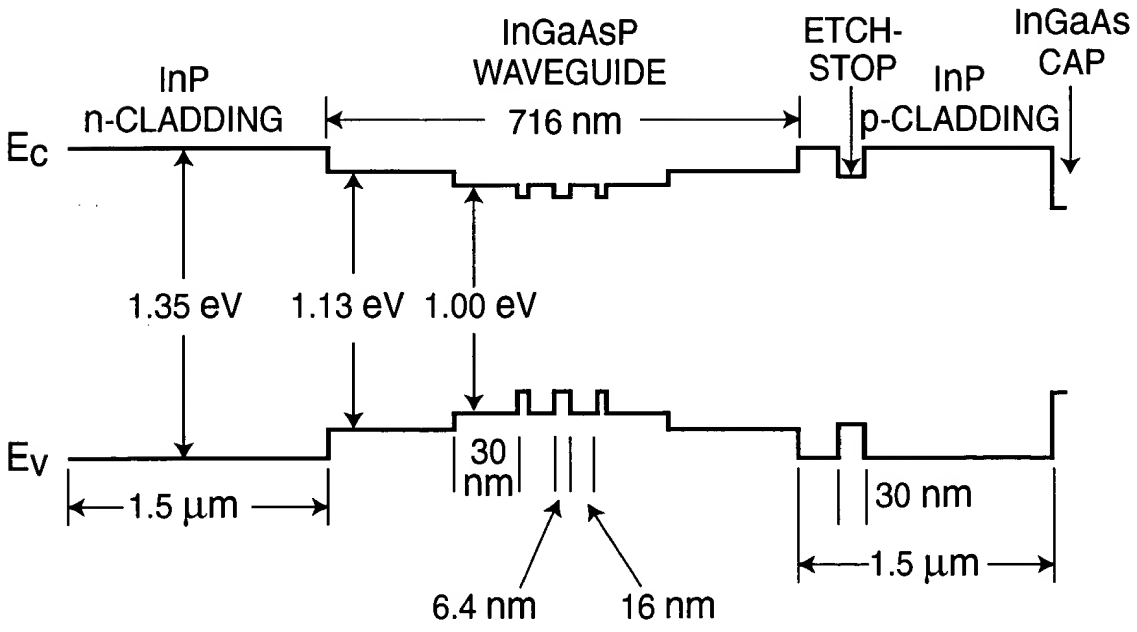


FIG. 2



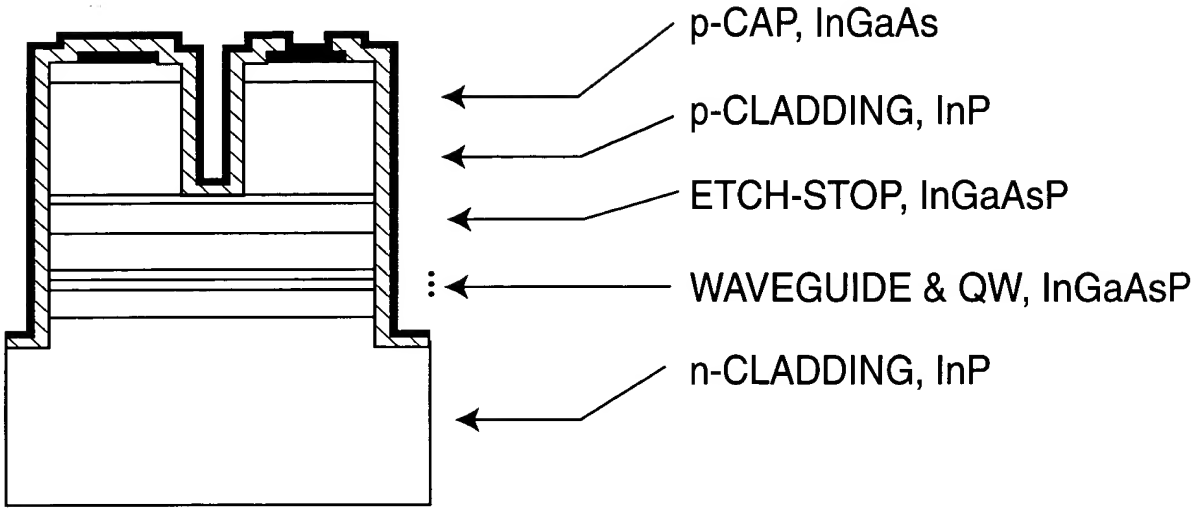
SCHEMATIC DRAWING OF THE RACETRACK LASER.

FIG. 3



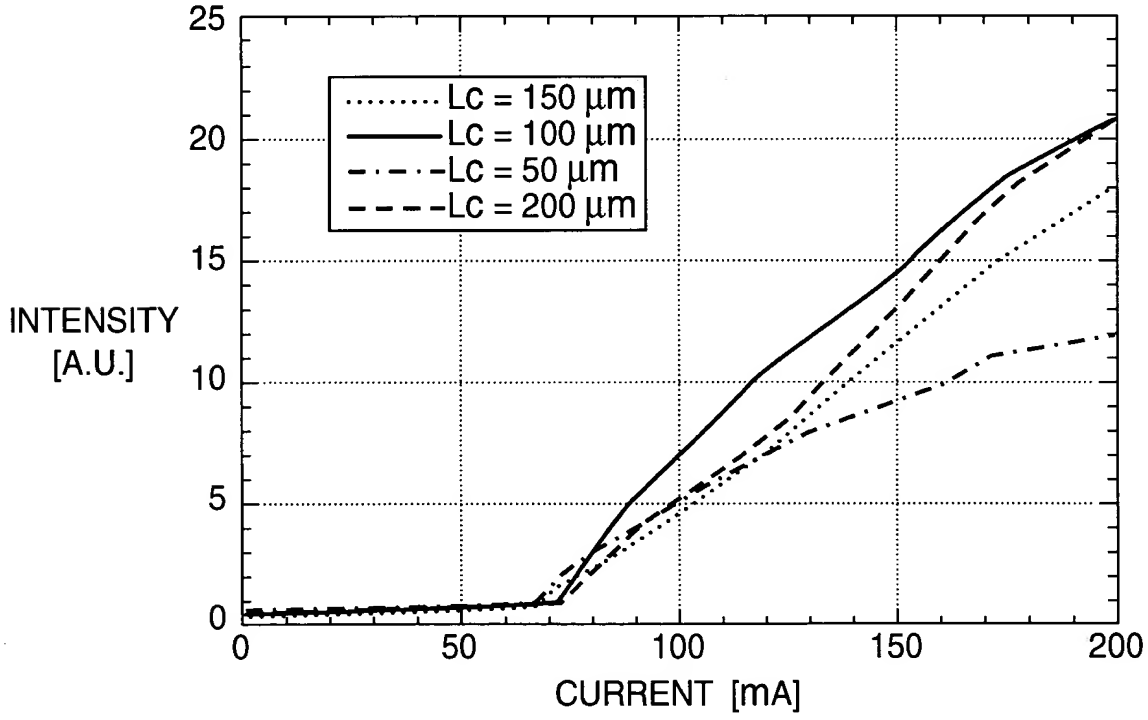
THE SCHEMATIC DRAWING OF THE EPITAXIAL STRUCTURE.

FIG. 4



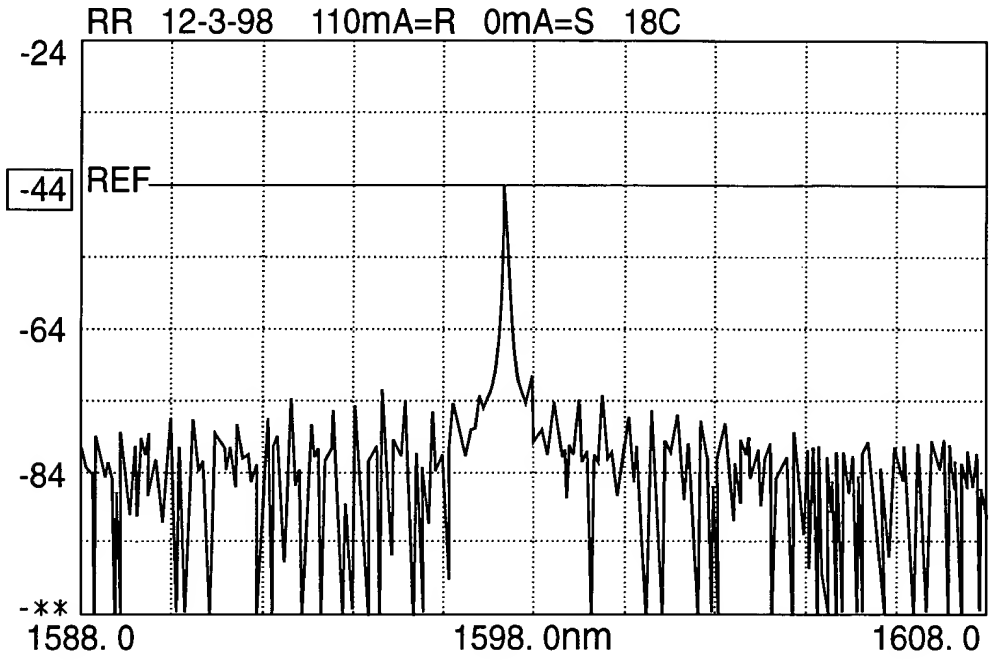
A SCHEMATIC DIAGRAM OF THE WAFER VIEW SHOWN IN CROSS SECTION TAKEN FROM THE COUPLING REGION BETWEEN THE RING AND THE STRAIGHT SECTIONS.

FIG. 5



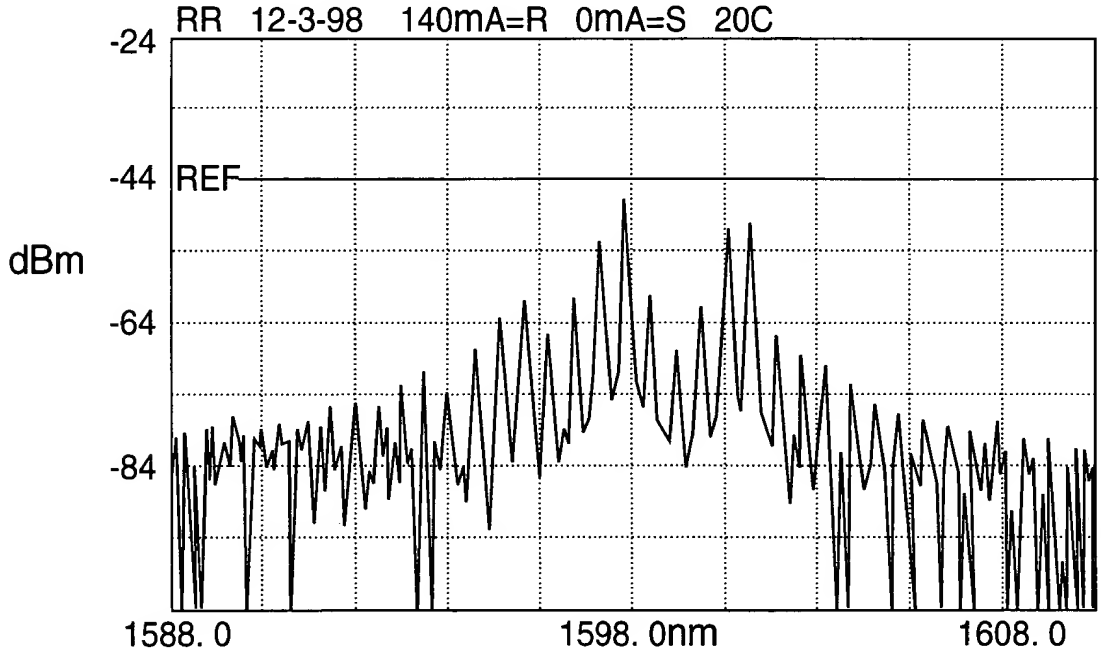
L-I CURVE FOR THE RACETRACK LASER WITH A COUPLING LENGTH RANGING FROM 50-200µm SHOWING NEARLY THE SAME THRESHOLD CURRENT FOR ALL CONFIGURATIONS, BUT WITH IMPROVED DIFFERENTIAL EFFICIENCY FOR THE 100µm COUPLER.

FIG. 6



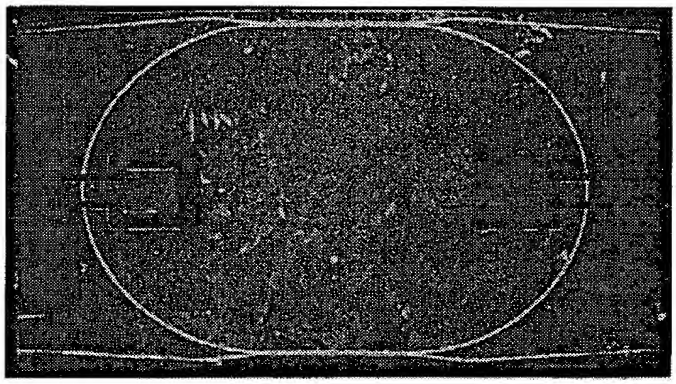
LASING SPECTRUM OF THE RACETRACK LASER AT A DRIVE CURRENT I - 110 mA, SHOWING SINGLE MODE OPERATION WITH AN SMSR = 26 dB. SINGLE-MODE OPERATION IS MAINTAINED FROM THRESHOLD TO NEARLY 2 I_{th}.

FIG. 7



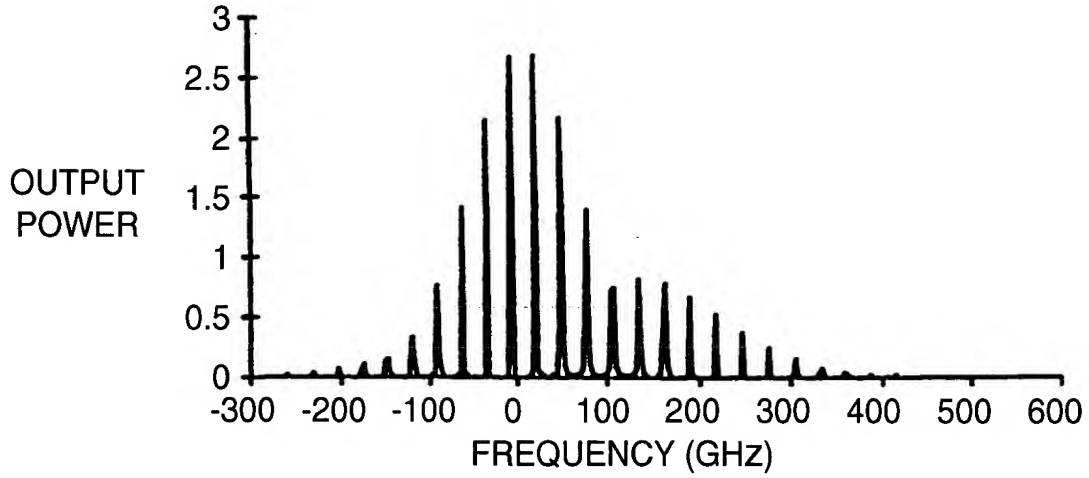
LASING SPECTRUM AT A DRIVE CURRENT I - 140 mA, AN ABRUPT TRANSITION FROM SINGLE-MODE (SEE FIG. 7) TO MULTI-MODE OPERATION, APPARENTLY DUE TO SELF-PULSATING.

FIG. 8



DUAL-ABSORBER MODE-LOCKED RACETRACK LASER FABRICATED IN GaAlAs/GaAs.

FIG. 9



COMPUTED OUTPUT SPECTRUM OF A PASSIVELY MODE-LOCKED RACETRACK LASER.

FIG. 10